IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application for:	Examiner: Rutland Wallis, Michael
Robert A. Dunstan	Art Group: 2836
Application No.: 10/644,683	Confirmation No. 6454
Filed: 08/19/2003	
For: AUTOMATIC SHUT OFF OF BACKUP POWER SOURCE IN THE EXTENDED ABSENCE OF AC POWER	

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Appellant's Brief

Dear Sir:

This Appeal Brief is in support of the appeal filed on November 21, 2007. This appeal arises from a final decision by the Examiner, mailed August 23, 2007. Appellants respectfully request consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the present patent application.

(1) Real Party in Interest

The real party in interest is Intel Corp. of Santa Clara, CA.

(2) Related Appeals and Interferences

To the best of Appellant's, Appellant's legal representative's, and the Assignee's knowledge, there are no appeals, interferences, or judicial proceedings which may be

related to, which may directly affect or be directly affected by, or which may have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

Claims 1-3, 5, 6, 10-17, 20, 24-34, and 36-38 are pending and rejected. All claim rejections are appealed. All pending claims are reproduced in Appendix A.

(4) Status of Amendments

Appellants amended claims 24 and 26 and canceled claims 9 and 23 after the Final Rejection. These claim amendments were entered by Examiner in an Advisory Action dated November 7, 2007.

(5) Summary of Claimed Subject Matter

Independent claim 1 is directed towards an apparatus. Support for each limitation of claim 1 in the form of figure elements corresponding to each limitation and portions of the Specification given by page and line numbers for each limitation is shown, inline. In particular:

In an apparatus, a method of operation comprising:

powering the apparatus from a backup power source, in response to the apparatus being in an AC absence condition; **(figure 1, element 132; page 7, lines 1-10; figure 2, elements 108 and 132)**

initiating, by an Operating System of the apparatus in response to the apparatus being in the AC absence condition, a suspend to memory process to place the apparatus in a suspended to memory state wherein an operational state of the apparatus is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state, and wherein no further activity occurs while the apparatus is in the suspended to memory state including suspension of all data transmissions; **(figure 1, element 126; figure 2b, element 216; page 10, lines 1-7, page 13 line 25 through page 14, line 2; figure 3, blocks 302-306)**

setting, by a BIOS of the apparatus upon the initiation of the suspend to memory process, a timer to initiate waking up of the apparatus after a period of time and to facilitate shutting off the backup power

source; and **(figure 2b, timer 146; page 11, lines 13-18; page 12, lines 3-5; page 13, lines 3-5; page 14, lines 8-19; figure 3, block 308)**

canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus. **(page 12, lines 12-15; page 16 lines 3-11; figure 4, block 406)**

Independent claim 15 is directed towards an system. Support for each limitation of claim 15 in the form of figure elements corresponding to each limitation and portions of the Specification given by page and line numbers for each limitation is shown, inline. In particular:

A system comprising:

a power supply to supply power to the system, including a backup power source to supply power during absence of AC to the power supply; and **(figure 1,elements 116 and 132; figure 2b, elements 116 and 132; page 7, lines 1-10, page 11, lines 13-18 and lines 23-25)**

an arrangement coupled to the power supply to shut off the power supply, after initiating, by an Operating System of the apparatus in response to the apparatus being in an AC absence condition, a suspend to memory process to place the system in a suspended to memory state wherein an operational state of the apparatus is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state, and wherein no further activity occurs while the system is in the suspended to memory state including suspension of all data transmissions, and after the expiration of a timer set, by a BIOS of the apparatus upon the initiation of the suspend to memory process, to expire after a period of time, the BIOS adapted to cancel the timer as part of a resume process to place the system in an active state in response to AC power re-presence. **(figure 2b, elements 146, 148; page 11, lines 25-27; page 12, lines 1-20; figure 1, element 126; figure 2b, element 216; page 10, lines 1-7, page 13 line 25 through page 14, line 2; figure 3, blocks 302-306; figure 2b, timer 146; page 11, lines 13-18; page 12, lines 3-5; page 13, lines 3-5; page 14, lines 8-19; figure 3, block 308; page 12, lines 12-15; page 16 lines 3-11; figure 4, block 406)**

Independent claim 30 is directed towards a power supply. Support for each limitation of claim 30 in the form of figure elements corresponding to each limitation and portions of the Specification given by page and line numbers for each limitation is shown, inline. In particular:

A power supply comprising:

an output interface; **(figure 2b, power rails 244; page 11, lines 16-18, 23-28)**

a backup power source; and **(figure 1, element 132, page 7, lines 1-17; figure 2b, element 132; page 11, lines 14-15)**

a switch conditionally coupling the integral backup power source to the output interface to output power through the output interface during absence of AC to the power supply, including a control interface accessible during a suspended to memory state of a host device hosting the power supply to allow the backup power source to be uncoupled from the output interface to stop the backup power source from outputting power through the output interface after the host device has entered the suspended to memory state, during which state no data are transmitted, said suspended to memory state initiated by an Operating System of the host device in response to the AC absence condition and wherein an operational state of the host device is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state and further after the expiration of a timer set, by a BIOS of the host device upon the initiation of the suspend to memory process, to expire after a period of time, the BIOS adapted to cancel the timer as part of a resume process to place the system in an active state in response to AC power re-presence. **(figure 1, elements 126, 142; figure 2b, elements 142, 146, 148, 216, 246; figure 3, blocks 302-306, 308; figure 4, block 406; page 7, lines 11-14; page 10, lines 1-7; page 11, lines 13-27; page 12, lines 1-20; page 13 lines 3-5, and line 25 through page 14, line 2; page 14, lines 8-19; page 16 lines 3-11)**

Independent claim 33 is directed towards an article of manufacturing. Support for each limitation of claim 33 in the form of figure elements corresponding to each limitation and portions of the Specification given by page and line numbers for each limitation is shown, inline. In particular:

An article of manufacture comprising:

a storage medium; **(figure 2c, element 250, page 12 line 26 through page 13 line 11)**

a plurality of programming instruction stored therein, designed to enable an apparatus to be able to perform, when the apparatus is in an AC absence condition: **(figure 2c, element 252, page 12 line 26 through page 13 line 11)**

setting a real time clock (RTC) to initiate waking of the apparatus after the apparatus has been placed into a suspended to memory state initiated by an Operating System of the apparatus in response to the AC absence condition, under which state no data are transmitted, and wherein an operational state of the apparatus is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state and to shut off a backup power source of the apparatus upon the expiration of a timer set, upon the initiation of the suspend to memory process, to expire after a period of time; and **(figure 1, element 126; figure 2b, element 216; page 10, lines 1-7, page 13 line 25 through page 14, line 2; figure 3, blocks 302-306; figure 2b, timer 146; page 11, lines 13-18; page 12, lines 3-5; page 13, lines 3-5; page 14, lines 8-19; figure 3, block 308)**

cancel the timer as part of a resume process to put the apparatus in an active state initiated in response to AC power being re-present at the apparatus. **(page 12, lines 12-15; page 16 lines 3-11; figure 4, block 406)**

(6) Grounds of Rejection to be Reviewed on Appeal

I. Whether claims 1, 10-15, and 24-32 are properly rejected under 35 USC § 103(a) as being unpatentable over U.S. Pat. No. 6,601,181 issued to Thomas ("Thomas") in view of U.S. Pat. No. 6,954,864 issued to Schelling ("Schelling") in further view of U.S. Pat. Pub. No. 2002/0143410 filed by Yance et al. ("Yance").

II. Whether Claims 2-3, 5-6, 16-17, 19, and 33-38 are properly rejected under U.S.C. §103(a) as being unpatentable over the combination of Thomas, Schelling, Yance, and U.S. Pat. No. 7,131,011 issued to Westerinen et al. ("Westerinen").

(7) Argument

I. The rejection of claims 1, 10-15, and 24-32 under 35 U.S.C. § 103(a) was improper because the combination of Thomas, Schelling, and Yance fails to teach or suggest canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus as required by the claims.

In the Final Office Action dated August 23, 2007, claims 1, 10-15, and 24-32 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Thomas, Schelling, and Yance. To establish a prima facie case for obviousness, the

Office must, among other things, show that all claim elements are taught or suggested by the prior art.[1] If the Office fails to establish a prima facie case, the applicant need not submit evidence of non-obviousness.[2] Because the combination fails to teach or suggest all claim elements, the Office has failed to establish a prima facie case for obviousness and Appellants are entitled to allowance of the rejected claims.

The claimed embodiments are part of a larger computing system scheme to provide an appearance of instant-on capability after AC power fails and resumes, much like a traditional media device such as a television or radio. In prior art approaches – such as approaches utilizing the ACPI approach – when a computing device switches to backup power after losing AC power, the operating system will initiate a suspend-to-memory state sustained by the backup power. If backup power fails, the device will have to be rebooted and the previous operational state re-created manually by the user. In the scheme described in the specification, the BIOS may intervene in the suspend-to-memory process and store a persistent copy of the operational state of the computing device before returning control of the device to the operating system for completion of the suspend-to-memory. If primary power returns before the backup power runs out, the device can be quickly restarted from the suspend-to-memory state. If backup power runs out, however, then the device can be shut down and later restarted from the persistent copy once AC power resumes. In either event, the user gets the look and feel of an "instant on" computing device, rather than the typical restart which requires the user to recreate the prior state of the computing device manually.

Claim 1 taken as a whole requires, among other things, that the BIOS set a timer to initiate waking the apparatus from the suspend-to-memory state and shutting off the backup power. Claim 1 also requires that the BIOS cancel the timer as part of a resume process if AC power returns. Canceling the timer prevents the device from being shut down if AC power resumes. The method of claim 1 comprises:

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[1] MPEP 2143

[2] MPEP 2142

"powering the apparatus from a backup power source, in response to the apparatus being in an AC absence condition;

initiating, by an Operating System of the apparatus in response to the apparatus being in the AC absence condition, a suspend to memory process to place the apparatus in a suspended to memory state wherein an operational state of the apparatus is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state, and wherein no further activity occurs while the apparatus is in the suspended to memory state including suspension of all data transmissions;

setting, by a BIOS of the apparatus upon the initiation of the suspend to memory process, a timer to initiate waking up of the apparatus after a period of time and to facilitate shutting off the backup power source; and

canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus."

The Office concedes that neither Thomas nor Schelling teach "canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus" as required by claim 1. The Office instead cites Yance paragraph [0031] as teaching a timer used as part of a resume process.[3] But Appellant argues that the combination of Thomas, Schelling, and Yance fails to teach or suggest this element of claim 1.

A. Yance, in addition to Thomas and Schelling, fails to teach "canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus" as required by claim 1.

Yance teaches a computing device with low-speed and high-speed operating modes. When AC power fails, the device uses a small backup power source and adopts the low-speed mode to conserve power. To accomplish this, Yance detects loss of AC power – by detecting the lack of an AC DET signal edge – and enters the low-speed mode if AC does not return for 50ms. If AC returns within 50ms, normal operation continues.[4]

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[3] See Final Office Action, page 4.

[4] See Yance paragraphs 29-31.

In an After-Final response filed October 23, 2007, Appellant argued that Yance fails to teach or suggest cancelling a timer as part of a resume process as required by claim 1. In response, the Office pointed out in an Advisory Action of November 7, 2007 that Yance paragraph 31 states that, after the lack of an AC DET signal edge is detected, "if an edge is detected within 5 0mS (sic) again, the microcontroller *returns* to normal operation mode." (Emphasis added.) The Office then concluded that "Yance teaches [that] a timer is associated with a resume process." But the Office reads paragraph 31 out of context.

Figure 1 of Yance (inset) shows three modes of operation: "normal operation", "power shutdown", and "stop oscillation". As can be seen, the device detects AC power loss during "normal operation" and, after 50ms, the device enters "power shutdown" mode. Paragraph 27, describing figure 1, states that "the microcomputer in normal operation mode with high speed oscillation transfers to an operation mode at the time of a power shutdown after 50 ms has passed since [the] last edge of an AC DET signal has [been] detected." In other words, the timer cancellation occurs *before* the device enters "power shutdown" mode.

Fig.1

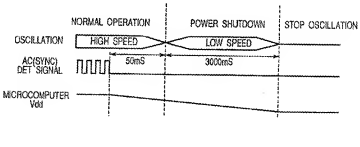

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Figure 1 and paragraph 27 therefore teach that the Yance device cancels a timer in order to maintain the device in "normal operational" mode if AC power returns. The device is in "normal operation" mode before canceling the timer and in "normal operation" mode after canceling the timer. There is no state that the Yance device can be said to "resume" from and no state that the Yance device can be said to "resume" to when the timer is canceled. Paragraph 31, read in context of the entire disclosure, does

not describe a new embodiment that cancels a timer as part of a resume process. In fact, as argued below, Yance teaches away from such an embodiment. One of ordinary skill reading the entire disclosure would recognize that paragraph 31 continues the discussion of the embodiments begun by paragraph 27 where the timer is canceled in order to maintain a current operational mode. The Yance device "returns" to normal operation mode – as stated in paragraph 31 – only in the sense that it halts the process of entering "power shutdown" mode. For at least this reason, Yance fails to teach "canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus" as required by claim 1.

Further, in the Advisory Action of November 7, the Office argued that combining the Thomas device – discussed in more detail below – with the Yance timer would augment step 516 of Thomas figure 5, which determines if there is a power failure before suspending to memory. According to the Office, the motivation to combine the Yance timer with Thomas would be to prevent suspending the Thomas device when an AC power outage is temporary.[5] The Office's understanding of the Yance timer as applied to Thomas would therefore require canceling the timer in order to maintain a current operational state. It would not involve canceling the timer as part of a resume process as required by claim 1. Whether or not the Office's asserted motivation to combine Thomas with Yance is valid, it illustrates that the timer cancellation of Yance is not the same as the timer cancellation of claim 1, even under the Office's reading of Yance.

B. There would have been no suggestion to modify Yance to achieve the "canceling" of claim 1.

The purpose of the Yance timer is unstated, but it likely ensures that a power outage is more than just temporary before switching the device to a low-power mode and shutting down the device. By the time the Yance device resumes operation, the timer has already run its course. Modifying Yance to cancel the timer during a resume

[5] See Advisory Action, page 3.

process would therefore be nonsensical and would render Yance unsuitable for its intended purpose. For at least this reason, Yance teaches away from such a modification and there would have accordingly been no suggestion to one of ordinary skill, at the time of invention, to so modify Yance.

C. There would have been no suggestion to modify either Thomas or Schelling to achieve the "canceling" of claim 1.

The purpose of Thomas is to ensure stable AC power before resuming a computing apparatus from a suspended-to-memory state. Thus, a timer is set upon resumption of AC power and the device does not resume until timer expiration. If the system detects another AC power failure during this time, it cancels the timer and waits for resumption of AC power.[6] If the Thomas device *canceled* the timer as part of a resume initiated as part of a re-presence of AC power, as in claim 1, the device would never resume thereby defeating the purpose of Thomas. Thomas therefore teaches away from "canceling, by the BIOS, the timer as part of a resume process initiated in response to AC being re-present at the apparatus" as required by claim 1. For at least this reason, there would have been no suggestion to modify Thomas to achieve the cancelling of claim 1.

Finally, there would have been no suggestion to modify Schelling to achieve the "canceling" of claim 1. Schelling – which teaches a computer system capable of being put into a low power state, reset, or shut down in response to a signal from a remote device – is cited for teaching a BIOS capable of setting a timer. The Schelling timer is set in response to a signal from a remote device. If the device has not been placed into a low-power state by the time the timer has run, the device is either shut down or reset. If the device is in a low-power state, then the timer expiration is ignored.[7] The device is reset upon timer expiration, not timer cancellation as in claim 1. By the time the

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[6] See figure 5 and column 8, lines 35-40 of Thomas

[7] See Schelling column 5, lines 59-64.

Schelling device is reset, the timer has already run its course. The device can not cancel a timer that has already expired. Therefore, Schelling teaches away from such a modification and one of ordinary skill would accordingly have found no suggestion to modify Schelling to achieve the "canceling" of claim 1.

For at least these reasons, the combination of Thomas, Schelling, and Yance fails to teach or suggest "canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus" as required by claim 1. For at least these reasons, the Office has failed to establish a prima facie case for obviousness and Appellants are therefore entitled to allowance of claim 1.

Claims 15 and 30 contain in substance the same limitations as claim 1. Also, claims 10-14, 24-29, and 31-32 depend from claims 1, 15, and 30, respectively. Thus, for at least the same reasons discussed above, claims 10-15, and 24-32 are also patentable over the combination and appellants are accordingly entitled to allowance of these claims.

II. The rejection of claims 2-3, 5-6, 16-17, 19, and 33-38 was improper because the combination of Thomas, Schelling, Yance, and Westerinen fails to teach all elements of the claims.

A. Claims 2-3, 5-6, 16-17, 19, and 33-34 are patentable over the combination.

Claims 2-3 and 5-6 depend from claim 1. As discussed above, claim 1 is patentable over the combination of Thomas, Schelling, and Yance. Further, Westerinen fails to cure the deficiencies of that combination. Westerinen discloses a computer system with backup capable of preserving a persistent state of a computer if AC power failure occurs while the system is suspended to memory. In particular, Westerinen is cited for disclosing that a BIOS can set a timer of a Real Time Clock (RTC). However, it does not disclose "canceling, by the BIOS, the timer as part of a resume process initiated in response to AC being re-present at the apparatus" as required by claims 2-3, 5-6, and 9-14 each incorporating the limitations of claim 1. Also, there would have been no suggestion to so modify Westerinen. Thus, the combination of Thomas, Schelling,

Yance and Westerinen fails to teach or suggest all limitations. Therefore, for at least these reasons, these claims are patentable over the combination.

Further, claims 16-17, 19-20, and 23-29 depend from claim 15 and claim 32 depends from claim 30. For at least the same reasons discussed above, these claims are also patentable over the combination.

Independent claim 33 contains in substance the same limitations as claim 1 and claims 34 and 36-38 depend from claim 33 incorporating its limitations. Thus, for at least the same reasons discussed above, claims 33-34 and 36-38 are patentable over the combination.

B. Notwithstanding the above, claim 5 is patentable over the combination for at least the following additional reason.

Claim 5 recites the method of claim 2, wherein:

> "the method further comprises the RTC initiating waking of the apparatus, after passing of the period of time, including as part of waking of the apparatus, the basic input/output system (BIOS) causing the backup power source to be shut off, transitioning the apparatus to an un-powered state instead."

Thomas is cited generally for the above-underlined element of claim 5.[8] Thomas discloses a UPS system and method which allows a computing device to be suspended either to memory or to disk sustained by backup power in the event of an AC power failure. To accomplish this, Thomas sets a timer upon re-application of AC power and does not resume the device until the expiration of the timer. This is the exact opposite of "transitioning the apparatus to an un-powered state instead" upon expiration of the timer as required by claim 5. Thomas therefore fails to teach or suggest all elements of claim 5 and in fact teaches away from this limitation. Because Schelling, Yance, and Westerinen also fail to teach or suggest this limitation, claim 5 is, for at least this additional reason, nonobvious and therefore patentable over the combination.

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[8] See Final Office Action page 6.

Appellants respectfully submit that all the appealed claims in this application are patentable and request that the Board of Patent Appeals and Interferences overrule the Examiner and direct allowance of the rejected claims.

We do not believe any fees, in particular extension of time fees, are needed. However, should that be necessary, please charge our Deposit Account No. 500393.

In addition, please charge any shortages and credit any overages to Deposit Account No. 500393.

Respectfully submitted,
Appellant Applicant

Dated: 01/17/2008

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Claims Appendix

1. (Previously Presented) In an apparatus, a method of operation comprising:

powering the apparatus from a backup power source, in response to the apparatus being in an AC absence condition;

initiating, by an Operating System of the apparatus in response to the apparatus being in the AC absence condition, a suspend to memory process to place the apparatus in a suspended to memory state wherein an operational state of the apparatus is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state, and wherein no further activity occurs while the apparatus is in the suspended to memory state including suspension of all data transmissions;

setting, by a BIOS of the apparatus upon the initiation of the suspend to memory process, a timer to initiate waking up of the apparatus after a period of time and to facilitate shutting off the backup power source; and

canceling, by the BIOS, the timer as part of a resume process initiated in response to AC power being re-present at the apparatus.

2. (Previously Presented) The method of claim 1, wherein the timer is a real time clock (RTC) to initiate waking of the apparatus after the period of time, to facilitate the shutting off of the backup power source.

3. (Previously Presented) The method of claim 2, wherein the basic input/output system (BIOS) is adapted to schedule the RTC to initiate waking of the apparatus after the period of time.

4. (Canceled)

5. (Previously Presented) The method of claim 2, wherein the method further comprises the RTC initiating waking of the apparatus, after passing of the period of time, including as part of waking of the apparatus, the basic input/output system (BIOS)

causing the backup power source to be shut off, transitioning the apparatus to an un-powered state instead.

6. (Original) The method of claim 5, wherein the BIOS causes the backup power source to be shut off as part of the waking of the apparatus if AC remains absent.

7. (Canceled)

8. (Canceled)

9. (Previously Presented) The method of claim 1, wherein the method further comprises the basic input/output system (BIOS) canceling the scheduled expiration of the timer as part of a resume process initiated in response to AC returning.

10. (Previously Presented) The method of claim 1, wherein the method further comprises

the timer expiring after passing of the period of time; and

a companion logic of the timer shutting off of the backup power source, placing the apparatus in an un-powered state.

11. (Original) The method of claim 10, wherein the timer shuts off the backup power source if AC remains absent.

12. (Original) The method of claim 1, wherein the method further comprises

monitoring for absence of AC to the power supply; and

generating a signal indicating AC absence on detection of absence of AC to the power supply.

13. (Original) The method of claim 12, wherein the monitoring and generating are performed by the power supply.

14. (Previously Presented) The method of claim 1, wherein the method further comprises accepting by the apparatus a specification of the period of time.

15. (Previously Presented) A system comprising:

a power supply to supply power to the system, including a backup power source to supply power during absence of AC to the power supply; and

an arrangement coupled to the power supply to shut off the power supply, after initiating, by an Operating System of the apparatus in response to the apparatus being in an AC absence condition, a suspend to memory process to place the system in a suspended to memory state wherein an operational state of the apparatus is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state, and wherein no further activity occurs while the system is in the suspended to memory state including suspension of all data transmissions, and after the expiration of a timer set, by a BIOS of the apparatus upon the initiation of the suspend to memory process, to expire after a period of time, the BIOS adapted to cancel the timer as part of a resume process to place the system in an active state in response to AC power re-presence.

16. (Original) The system of claim 15, wherein the arrangement comprises a real time clock (RTC) employable to initiate waking of the system after the period of time, to facilitate shutting off of the backup power source.

17. (Previously Presented) The system of claim 16, wherein the basic I/O system (BIOS) is adapted to schedule the RTC to initiate waking of the system after the period of time.

18. (Canceled)

19. (Previously Presented) The system of claim 16, wherein the basic I/O system (BIOS) is equipped to cause the backup power source to be shut off when the RTC initiates waking of the system.

20. (Original) The system of claim 17, wherein the BIOS is further equipped to cause the backup power source to be shut off if AC remains absent.

21. (Canceled)

22. (Canceled)

23. (Previously Presented) The system of claim 15, wherein the BIOS is further equipped to cancel the scheduled expiration of the timer as part of a resume process to resume the system to an active state in response to AC being re-present at the system.

24. (Original) The system of claim 23, wherein the system further comprises a circuit coupled to the timer to generate a shut off signal to shut off the backup power off, at the expiration of the timer.

25. (Original) The system of claim 24, wherein the circuit is further equipped to receive a AC condition signal indicating whether AC presence or absence, and condition the generation of the shut off signal based on the AC condition signal.

26. (Original) The system of claim 21 wherein the system further comprises a controller to control at least a selected one of an input and an output of the system, and the timer is a part of the controller.

27. (Previously Presented) The system of claim 15, wherein the timer is a part of the power supply.

28. (Original) The system of claim 15, wherein the arrangement is further equipped to accept for the system a specification of the period of time.

29. (Original) The system of claim 15, wherein the system further comprises a networking interface.

30. (Previously Presented) A power supply comprising:

an output interface;

a backup power source; and

a switch conditionally coupling the integral backup power source to the output interface to output power through the output interface during absence of AC to the power supply, including a control interface accessible during a suspended to memory state of a host device hosting the power supply to allow the backup power source to be uncoupled from the output interface to stop the backup power source from outputting power through the output interface after the host device has entered the suspended to memory state, during which state no data are transmitted, said suspended to memory state initiated by an Operating System of the host device in response to the AC absence condition and wherein an operational state of the host device is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state and further after the expiration of a timer set, by a BIOS of the host device upon the initiation of the suspend to memory process, to expire after a period of time, the BIOS adapted to cancel the timer as part of a resume process to place the system in an active state in response to AC power re-presence.

31. (Original) The power supply of claim 30, wherein the power supply further comprises a monitor to monitor for presence or absence of AC to the power supply, and to generate a signal indicating the presence or absence of AC accordingly.

32. (Previously Presented) The power supply of claim 30, wherein the power supply further comprises the timer settable to expire after the period of time to shut off the backup power source.

33. (Previously Presented) An article of manufacture comprising:

a storage medium;

a plurality of programming instruction stored therein, designed to enable an apparatus to be able to perform, when the apparatus is in an AC absence condition:

setting a real time clock (RTC) to initiate waking of the apparatus after the apparatus has been placed into a suspended to memory state initiated by an Operating System of the apparatus in response to the AC absence condition, under which state no data are transmitted, and wherein an operational state of the apparatus is saved to volatile memory requiring a source of electrical power to sustain the suspended to memory state and to shut off a backup power source of the apparatus upon the expiration of a timer set, upon the initiation of the suspend to memory process, to expire after a period of time; and

cancel the timer as part of a resume process to put the apparatus in an active state initiated in response to AC power being re-present at the apparatus.

34. (Previously Presented) The article of claim 33, wherein the programming instructions are further designed to enable the apparatus to perform the setting operation, when intervening in a process to suspend the apparatus.

35. (Canceled)

36. (Original) The article of claim 33, wherein the programming instructions are further designed to enable the apparatus to shut off the backup power source when the RTC initiates waking of the apparatus after passing of the time period.

37. (Original) The article of claim 36, wherein the programming instructions are further designed to enable the apparatus to perform the shut off conditioned on AC remains absent at the apparatus.

38. (Previously Presented) The article of claim 33, wherein the programming instructions implement the enabling of the apparatus to perform f the setting operation as part of the basic input/output system (BIOS).

Evidence Appendix

None. No evidence has been submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132. No evidence entered by Examiner has been relied upon by Appellants in the appeal.

Related Proceedings Appendix

None. To the best of Appellants', Appellants' legal representative's, and the Assignee's knowledge, there are no appeals, interferences, or judicial proceedings which may be related to, which may directly affect or be directly affected by, or which may have a bearing on the Board's decision in the pending appeal.